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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,576	12/08/2003	Frank S. Filz	BEA9-2003-0016-US1	3051
49056 7590 01/08/2008 LIEBERMAN & BRANDSDORFER, LLC 802 STILL CREEK LANE GAITHERSBURG, MD 20878			EXAMINER JOHNSON, JOHNESE T	
			ART UNIT 2166	PAPER NUMBER
			MAIL DATE 01/08/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/730,576

Applicant(s)

FILZ, FRANK S.

Examiner

Johnese Johnson

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-12, 14, 16-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14, 16-19 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 November 2007 has been entered.

***Remarks***

2. In response to the Amendment filed on 16 November 2007, claims 1-12, 14, 16-19, and 21-23 are pending.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1 and 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim is rejected under 35 U.S.C. 101 as failing to produce a useful, concrete, and tangible result. A claimed series of steps or acts for which there does not appear to be disclosed a result in a useful, concrete, and tangible result are not statutory within the meaning of 35

U.S.C. 101. Claim1 is directed to a method of controlling interoperability of members of a cluster. However, the last step recites "validating software compatibility". What happens to the members of the cluster after software is validated? Further explanation is required.

Claim 8 is directed to a computer system. The system does not contain a processor or hardware computer components. Hardware should be recited in the body of the claim to overcome the rejection.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-12, 14, 16-19, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Short et al. (US Pat. No. 6,178,529), in view of Szabo et al. (US Pat. No. 7,065,746) and further in view of Frank et al.(U.S. Pat. No. 6,871,222).

As to claim 1, Short et al. disclose:

creating a version control system including a disk header record of a shared resource (see col. 4, lines 30-31 - every disk in the RAID has a header file which is the first file that is read when the disk is read) and a version control record within said shared resource, said version control record comprising all versions of each type of data structure in said shared resource (see col. 9, lines 20-22).

However, Short et al. does not explicitly disclose:

said version control record to organize meta data in a known location in said shared resource in communication with said cluster; and

validating software compatibility of a new cluster member with storage media in said shared resource assigned to the cluster separately using the disk header record and the version control record prior to a new cluster member joining said cluster.

Szabo et al. discloses:

said version control record to organize meta data in a known location in a shared resource in communication with said cluster (see Szabo et al., col. 5, lines 17-38).

It would have been obvious to have modified the teachings of Short et al. by the teachings of Szabo et al. to provide a computerized method and system of managing the integrity of an integrated applications environment because a highly integrated system can create interdependencies where a small change in one application may adversely impact obvious or seemingly unrelated applications. Each change can cause one or more component that depends on the changed application to become unstable, thereby compromising the integrity of the integration (see Szabo et al. col. 1, lines 53-55 and Szabo et al. col. 1, lines 23-26, 29-32).

However, the combination of Short et al. and Szabo et al. do not disclose:

validating software compatibility of a new cluster member with storage media in said shared resource assigned to the cluster separately using the disk header record and the version control record prior to a new cluster member joining said cluster.

Frank et al. disclose:

validating software compatibility of a new cluster member with storage media in said shared resource assigned to the cluster separately using the disk header record (see col. 4, lines 1-15) and the version control record prior to a new cluster member joining said cluster (see col. 6, lines 23-36).

It would have been obvious to have modified the teachings of Short et al. and Szabo et al. by the teachings of Frank et al. to determine if a node was compatible with the cluster members and had access to data; and, to preserve the integrity of the shared data ( see Frank et al. col. 2, lines 7-22).

As to claim 2, Short et al., as modified, disclose:

scanning a data structure type record within said shared resource prior to accessing said version control record (see Short et al., col. 9, lines 15-22).

As to claim 3, Short et al., as modified, disclose:

wherein the step of validating software compatibility of a new cluster member includes scanning said version control record for said data structure version conflict (see Short et al., col. 9, lines 15-22).

As to claim 4, Short et al., as modified, disclose:

maintaining a table within said version control record of an operating software version of each node in said cluster (see Short et al., col. 9, lines 33-35).

As to claim 5, Short et al., as modified, disclose:

validating compatibility of each node in said cluster with said operating software version table (see Short et al., col. 9, lines 15-22, 33-35 and Short et al., col. 6, lines 59-62) prior to upgrading each data structure in said shared resource (see Short et al., col. 5, lines 36-38 – global update).

As to claim 6, Short et al., as modified, disclose:

wherein the step of validating compatibility of each of said nodes in said cluster is inclusive of inactive cluster nodes (see Short et al., col. 5, lines 12-21).

As to claim 7, Short et al., as modified, disclose:

wherein said shared resource is selected from a group consisting of: a storage area network, and shared memory (see Short et al., col. 2, line 56).

As to claim 8, Short et al. disclose:

at least two nodes adapted to operate in a computer cluster (wherein “adapted to” is being interpreted as intended use recitation - see col. 4, line 40);  
a version control system having a disk header and a version control record of a shared resource, (see col. 9, lines 33-35); and  
a version control record within said shared resource (see col. 9, lines 20-22),  
said version control record inclusive of all versions of each type of data structure in said shared resource (see col. 9, lines 33-35).

However, Short et al. does not explicitly disclose:

said version control record to organize meta data in a known location in a shared resource in communication with said cluster.

a membership manager adapted to validate compatibility of a new cluster member with each of said data structure with use of said version control record prior to acceptance of said new cluster member.

Szabo et al. discloses:

said version control record to organize meta data in a known location in a shared resource in communication with said cluster (see col. 5, lines 17-38).

It would have been obvious to have modified the teachings of Short et al. by the teachings of Szabo et al. to provide a computerized method and system of managing the integrity of an integrated applications environment because a highly integrated system can create interdependencies where a small change in one application may adversely impact obvious or seemingly unrelated applications. Each change can cause one or more component that depends on the changed application to become unstable, thereby compromising the integrity of the integration (see Szabo et al. col. 1, lines 53-55 and Szabo et al. col. 1, lines 23-26, 29-32).

validating software compatibility of a new cluster member with storage media in said shared resource assigned to the cluster separately using the disk header record and the version control record prior to a new cluster member joining said cluster.

However, the combination of Short et al. and Szabo et al. do not disclose:



a membership manager adapted to validate compatibility of a new cluster member with each of said data structure with use of said version control record prior to acceptance of said new cluster member.

Frank et al. disclose:

a membership manager adapted to validate compatibility of a new cluster member with each of said data structure with use of said disk header record (see col. 4, lines 1-15) and said version control record prior to acceptance of said new cluster member (see col. 6, lines 23-36).

It would have been obvious to have modified the teachings of Short et al. and Szabo et al. by the teachings of Frank et al. to determine if a node was compatible with the cluster members and had access to data; and, to preserve the integrity of the shared data ( see Frank et al. col. 2, lines 7-22).

As to claim 9, Short et al., as modified, disclose:

an operating software version table within said version control record (see Short et al., col. 9, lines 33-35).

As to claim 10, Short et al., as modified, disclose:

a validation manager adapted to validate compatibility of an existing cluster member with said operating software version table (see Short et al., col. 9, lines 15-22, 33-35 and Short et al., col. 6, lines 59-62) prior to an upgrade of each data structure in said shared storage see Short et al., col. 5, lines 36-38 – global update).

As to claim 11, Short et al., as modified, disclose:

wherein said validation manager is inclusive of inactive cluster nodes (see Short et al., col. 5, lines 12-21).

As to claim 12, Short et al., as modified, disclose:

a version manager adapted to scan a data structure type record within said shared resource prior to access of said version control record by a cluster member (see Short et al., col. 5, lines 12-21).

As to claim 14, Short et al. disclose:

A computer-readable recordable storage medium;  
instructions to provide a version control record system including a disk header record of a shared resource (see col. 4, lines 30-31 - every disk in the RAID has a header file which is the first file that is read when the disk is read) and a version control record of a shared resource, said version control record inclusive of each type of data structure in said shared resource; (see col. 9, lines 33-35).

However, Short et al. do not explicitly disclose:

a version control record, said version control record to organize meta data in a known location in a shared resource;

instructions to validate compatibility of a new cluster member with storage media in said shared resource assigned to a cluster using said version control record prior to said new cluster member joining said cluster.

Szabo et al. discloses:

a version control record, said version control record to organize meta data in a known location in said shared resource (see col. 5, lines 17-38).

It would have been obvious to have modified the teachings of Short et al. by the teachings of Szabo et al. to provide a computerized method and system of managing the integrity of an integrated applications environment because a highly integrated system can create interdependencies where a small change in one application may adversely impact obvious or seemingly unrelated applications. Each change can cause one or more component that depends on the changed application to become unstable, thereby compromising the integrity of the integration (see Szabo et al. col. 1, lines 53-55 and Szabo et al. col. 1, lines 23-26, 29-32).

However, the combination of Short et al. and Szabo et al. do not disclose: instructions to validate compatibility of a new cluster member with storage media in said shared resource assigned to a cluster using said version control record prior to said new cluster member joining said cluster

Frank et al. disclose:

Instructions (see col. 11, lines 1-2) to validate compatibility of a new cluster member with storage media in said shared resource assigned to a cluster separately using said disk header record (see col. 4, lines 1-15) and said version control record prior to said new cluster member joining said cluster (see col. 6, lines 23-36).

It would have been obvious to have modified the teachings of Short et al. and Szabo et al. by the teachings of Frank et al. to determine if a node was compatible with the cluster members and had access to data; and, to preserve the integrity of the shared data ( see Frank et al. col. 2, lines 7-22).

As to claim 16, Short et al., as modified, disclose:

further comprising instructions to validate compatibility of each cluster member (see Short et al., col. 9, lines 15-22, 33-35 and Short et al., col. 6, lines 59-62) prior to upgrading each data structure in said shared resource (see Short et al., col. 5, lines 36-38 – global update).

As to claim 17, Short et al., as modified, disclose:

wherein said compatibility validation means is an operating software version table within said version control record (see Short et al., col. 9, lines 33-35).

As to claim 18, Short et al., as modified, disclose:

wherein said compatibility validation means includes inactive cluster nodes (see Short et al., col. 5, lines 12-21).

As to claim 19, Short et al., as modified, disclose:

Instructions to scan a data structure type record prior to access of said version control record (see Short et al., col. 5, lines 12-21).

As to claim 21, Short et al., as modified, disclose:

wherein the step of validating software compatibility of said new cluster member with storage media (see Short et al., col. 5, lines 12-21) includes determining if said header record of a master disk in said shared resource (see Short et al., col. 4, lines 30-31 - every disk in the RAID has a

header file which is the first file that is read when the disk is read) is compatible with software operating in the new cluster member (see Short et al., col. 9, lines 15-22, 33-35 and Short et al., col. 6, lines 59-62).

As to claim 22, Short et al., as modified, disclose:

wherein said membership manager (see col. 4, lines 63-64) determines if said header record of a master disk in said shared resource (see Short et al., col. 4, lines 30-31 - every disk in the RAID has a header file which is the first file that is read when the disk is read) is compatible with software operating in the new cluster member (see Short et al., col. 9, lines 15-22, 33-35 and Short et al., col. 6, lines 59-62).

As to claim 23, Short et al., as modified, disclose:

wherein the instructions (see Short et al., col. 2, line 41) to validating software compatibility of said new cluster member with storage media (see col. 5, lines 12-21) includes instructions to if said header record of a master disk in said shared resource (see Short et al., col. 4, lines 30-31 - every disk in the RAID has a header file which is the first file that is read when the disk is read) is compatible with software operating in the new cluster member (see Short et al., col. 9, lines 15-22, 33-35 and Short et al., col. 6, lines 59-62).

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 8, and 14 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnese Johnson whose telephone number is 571-270-1097. The examiner can normally be reached on 4/5/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

04 January 2008  
JJ

  
**HOSAIN ALAM**  
SUPERVISORY PATENT EXAMINER